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## Patent Abstracts of Japan

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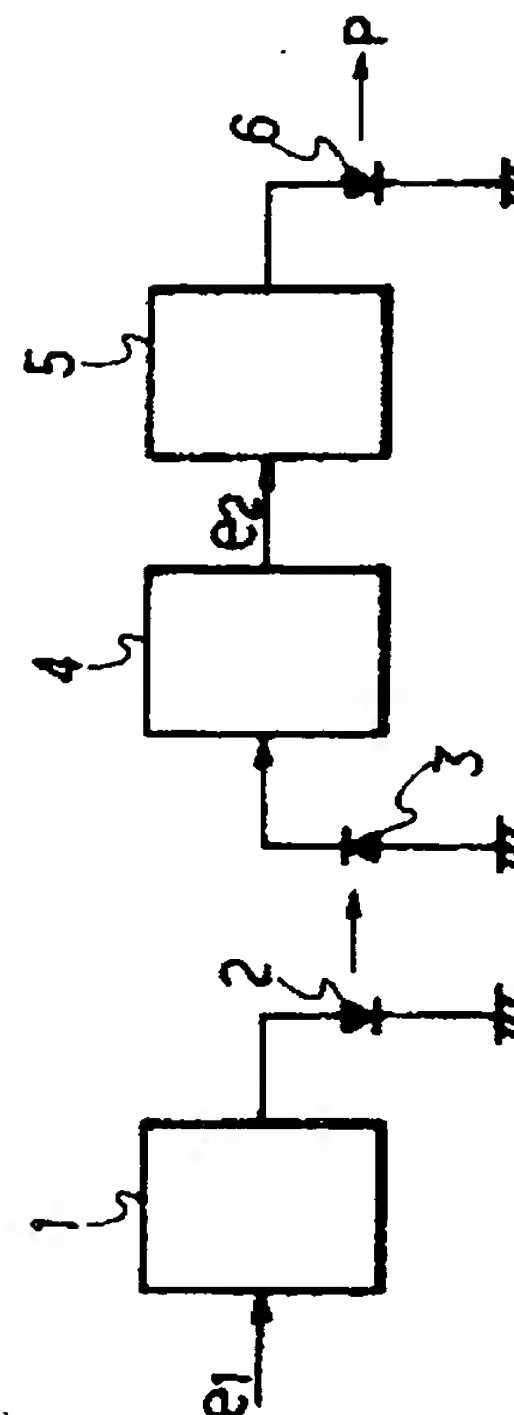
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APPLICATION NUMBER : 55028966

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TITLE : LIGHT MODULATING CIRCUIT



ABSTRACT : PURPOSE: To improve the nonlinear distortion, by using the same type of light source as the light source being the objective of nonlinear distortion improvement.

CONSTITUTION: The input signal  $e_1$  modulates the outputted optical signal of the light source 2 the same type as the light source 2 via the modulation circuit 1. The outputted optical signal of the light source 2 is converted again into an electric signal with the photodetector 3 optically coupled with the light source 2, and the polarity is inverted at the amplifier 4 after amplification into the signal  $e_2$ . The signal  $e_2$  includes nonlinear distortion due to the light source 2, and the outputted optical signal  $P$  of the light source 6 is modulated with the signal polarity opposite to the case with the modulation of the light source 2 via the modulation circuit 5. Thus, the nonlinear distortion produced at the light source 6 is canceled with the nonlinear distortion by the light source 2, allowing to improve the distortion.

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